STATE WATER RESOURCES CONTROL BOARD
DIVISION OF WATER RIGHTS
P.O. BOX 2000
SACRAMENTO, CA 95812-2000

INITIAL STUDY

I. Background

PROJECT TITLE: Rodney Carley
Application to Appropriate Water

APPLICATION: 31360

APPLICANT: Rodney Carley
606 Wilson Ave.
Novato, CA 94947

APPLICANT'S CONTACT PERSON: Daniel Gamer
55 Professional Center Parkway, Suite H
San Rafael, CA 94903-2729

Zoning: Agriculture

Introduction

Mr. Rodney Carley (Applicant) filed water right Application 31360 (A031360), for a 19-acre-foot onstream reservoir on July 19, 2002. The project is located on the Jamison Ridge, California, U.S. Geological Survey (USGS) 7.5 minute topographic quadrangle map in the NW¼ , NW¼ of Section 29, T22N, R12W, MDB&M (Figure 1). The property and site location is on an Unnamed Stream tributary to Turner Creek, thence Mill Creek, thence the Middle Fork Eel River, thence the Eel River, and thence the Pacific Ocean. The reservoir is intended to provide water for irrigation, domestic, and fire protection use. Applicant intends to irrigate two acres for the purpose of enhancing wildlife habitat.

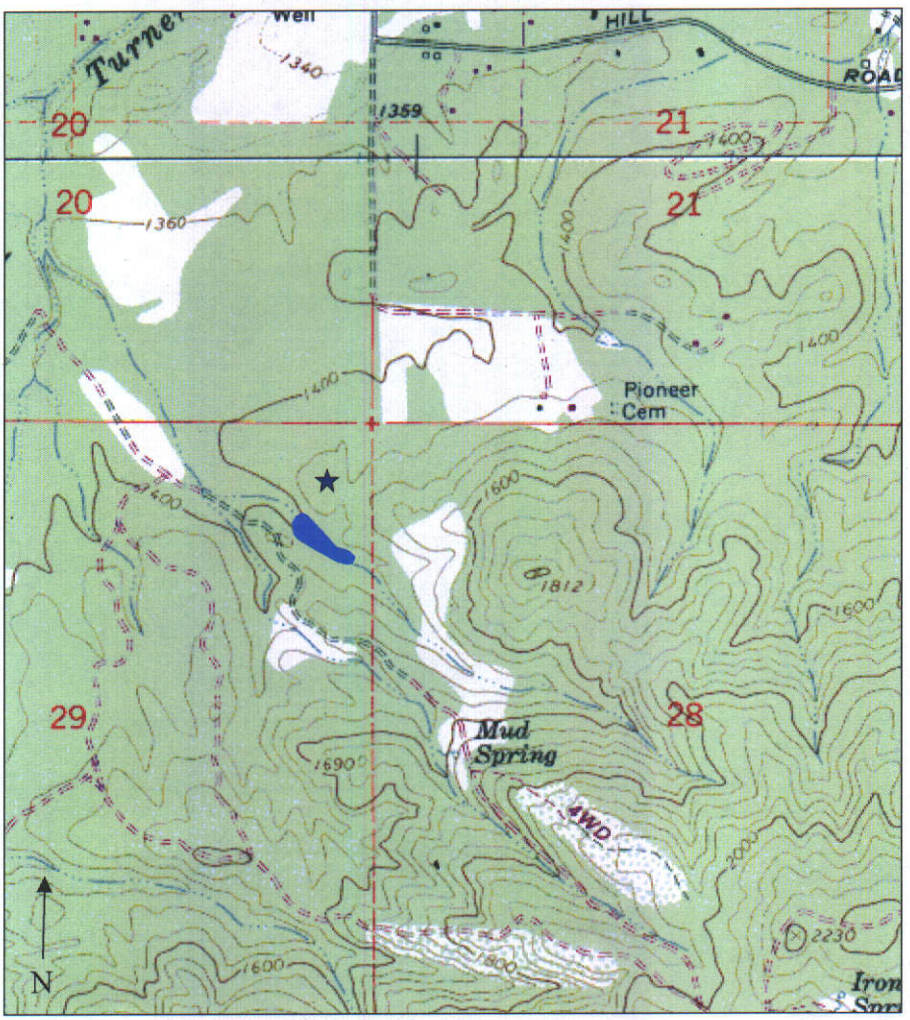
The State Water Resources Control Board (State Water Board), Division of Water Rights (Division) issued a small domestic use registration (SDUR) certificate (R603, Application D31221R) for a 10 acre-foot pond on the project site on November 1, 2001. In a Memorandum dated January 7, 2002, the California Department of Fish and Game (DFG) requested that the State Water Board revoke the SDUR, citing the applicant's violations of the conditions of the certificate and failure to follow the procedures required by law. In particular, the pond was constructed before the issuance of a DFG 1603 streambed alteration permit; and the impoundment had the storage capacity of 19 acre-feet (af), which exceeds the estimated 10 acre-feet applied for under the SDUR. As of August 9, 2002, the applicant agreed to store a maximum of 10 acre-feet as per the SDUR, and to diligently pursue A031360 for storage of 19 af. DFG protested A031360 in a letter dated January 17, 2003.

The DFG January 17, 2003 letter itemized protest dismissal terms, which were intended to mitigate adverse impacts to fisheries and wildlife resources. The dismissal terms included a habitat based stream needs assessment (habitat typing of the tributary), a hydrologic study, a

proposal to provide a bypass flow for the protection of fish and aquatic habitat, and a plant and animal species assessment. The applicant hired the consulting firm, Natural Resources Management Corporation (NRM), to conduct the listed studies and assist the Division in carrying out its responsibilities under CEQA and the Water Code. To date, hydrologic and biologic studies, including a water availability/cumulative flow impairment index (CFII) analysis, instream habitat typing, and fish, plant and wildlife species surveys have been conducted. Reports have been completed for these studies and are on file with the Division.

Division staff conducted a field visit on May 12, 2004. Also in attendance were the applicant, Linda Hanson (DFG), Stacy Li (National Marine Fisheries Service [NMFS]), Dennis Halligan (NRM Fisheries Biologist), and Sandra Brown (NRM Hydrologist). Following a field review of the site, a variety of topics were discussed with Rodney and Brenda Carley (Applicant). Discussion items included the scientific studies already conducted at the site, State and Federal permitting processes, on-site and off-site mitigation measures, DFG's terms of protest dismissal, and an overview of the next steps in the review process.

Figure 1. Topographic Map and approximate location of Project Site



Project Description

The applicant applied for a permit for a 19-acre-foot onstream impoundment. A reservoir inundating approximately 2.5 surface acres with an 18-foot high dam is currently in place and impounding 10 acre-feet of water as authorized under a SDUR. This project seeks to authorize the existing dam and allow for storage and use of the entire 19-acre foot capacity of the reservoir.

The project is located in Round Valley, Mendocino County approximately three miles southeast of the town of Covelo. At the point of diversion (POD) the watershed area is approximately 170 acres (0.27 square miles) and captures two small unnamed intermittent watercourses: a small headwater drainage, and a significantly lesser drainage just to the north (Figure 1). The locations are West 500 feet and North 250 feet from the SE corner of the NE ¼ of the NE ¼ of Section 29, T22N, R12W, MDB&M for the unnamed headwater drainage, and West 550 feet and North 350 feet from the SE corner of the NE ¼ of the NE ¼ of Section 29, T22N, R12W, MDB&M for the lesser unnamed drainage. Water will be used for irrigation of two acres to enhance wildlife habitat, domestic use, and fire control.

No unauthorized/unreported diversions were observed within the unnamed tributary containing the Carley's reservoir during field visits that extended from upstream of the dam, and downstream to Turner Creek. In addition, no other impoundments or diversions were observed within the unnamed tributary drainage during a review of aerial photographs and while traveling on the property's road system.

Amount and Season of Diversion: 19 acre-feet per annum to be collected from January 1 of each year to April 1 of the succeeding year.

Purposes of Uses: Irrigation, Fire Control, and Domestic.

Photo 1. Pond / Project Site looking upstream, Feb. 21, 2003.

Environmental Setting

Based on information contained in the Division files, it is evident that the 19-acre foot reservoir and at least a portion of the 2-acre irrigated place of use existed in its current configuration at the time Application 31360 was filed. Therefore, these project features were in place at the time the Division began its environmental review and are part of the baseline condition for this analysis. At that time, however, the Applicant agreed to store a maximum of 10-acre feet of water in the reservoir to ensure compliance with the SDUR and avoid potential enforcement against unauthorized diversion or use of water. Approval of Application 31360 will result in the storage and diversion of an additional 9-af of water from the Unnamed Stream relative to the baseline condition. Some additional development of the 2-acre place of use may also occur.

The project is located on an approximately 1,660-acre ranch in the southern Round Valley foothills about three miles southeast of the town of Covelo. Elevations over the property range from 1,360 feet to 2,230 feet. Slopes over the property range from 0 to over 60 percent. The climate in Mendocino County consists of cool, moist winters and hot dry summers. The average annual rainfall within the area of the project is 45 inches per year, with most of the precipitation occurring between November and April.

The soils in the project region are classified as the Hopland-Witherell-Squawrock complex. Soil properties of each series in the complex can be seen in Table 1 below. Slopes are primarily 15 to 30 percent, with some areas that have slopes less than 15 percent. Vegetation within the project area consists primarily of oak woodlands and intermixed grasslands. See attached botanical report.

Table1: Soil Properties

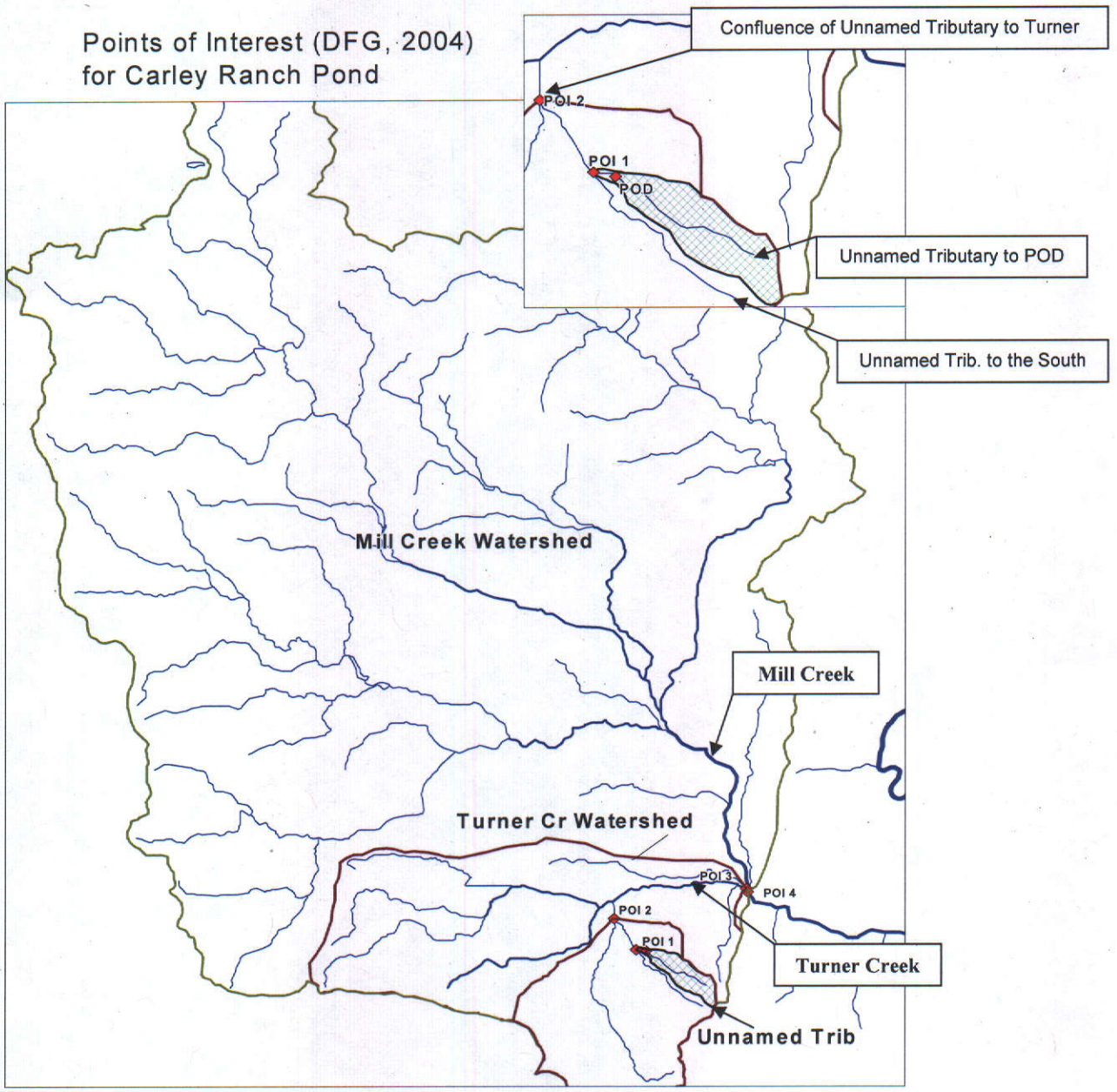
Series	Permeability	Water Capacity	Surface Runoff	Hazard of Water Erosion
Hopland	Moderately slow	Low to Moderate	Rapid	Moderate
Witherell	Moderate	Very Low	Rapid	Moderate
Squawrock	Moderate	Low	Rapid	Moderate

Wildlife within the area consists of common species including: deer (*Odocoileus hemionus*), raccoon (*Procyon lotor*), western gray squirrel (*Sciurus griseus*), striped skunk (*Mephitis mephitis*), western fence lizard (*Sceloporus occidentalis*), red-tailed hawk (*Buteo jamaicensis*), and a variety of song birds and waterfowl. See attached wildlife report.

Photo 2. Unnamed Stream above pond February 21, 2003.

Photo 3. Unnamed Stream below 1st tributary, approximately 1200 feet downstream of the pond, Feb. 21, 2003.

Figure 2: General Vicinity Map of project area, Round Valley, Covelo, California



Fisheries resources within the immediate project area includes bluegills that have taken up residence in the impoundment outfall pool that is kept wet during the summer months by seepage through the dam. Steelhead trout and Chinook salmon are known to occur downstream of the project. Additionally the Eel River and its tributaries are known to support yellow-legged frogs. The remainder of the Unnamed Stream above and below the impoundment loses surface flow and typically dries up in late spring. The watercourse remains dry until the fall rains commence and provide runoff. Chinook salmon (*Oncorhynchus tshawytscha*) and steelhead trout (*O. mykiss*) are known to occur about 0.6 miles downstream of the dam in Turner Creek, a perennial stream. Coho salmon (*O. kisutch*) do not occur in the project area, Turner Creek, or its tributaries. The Unnamed Stream upstream and downstream of the dam does not appear to contain suitable seasonal spawning and rearing habitat for salmonid species. However, the

lower reach may provide winter velocity refugia during high flow events in Turner Creek. See attached fisheries report.

Responsible, Trustee, or Interested Agencies

California Department of Fish and Game
National Marine Fisheries Service

II. Environmental Impacts

The environmental factors checked below could be potentially affected by this project. See the checklist on the following pages for more details.

☐	Land Use and Planning	☐	Transportation/Circulation	☐	Public Services
☐	Population and Housing	■	Biological Resources	■	Utilities and Service Systems
☐	Geological Problems /Soils	☐	Energy and Mineral Resources	☐	Aesthetics
■	Hydrology/Water Quality	☐	Hazards	■	Cultural Resources
☐	Air Quality	☐	Noise	☐	Recreation
☐	Agriculture Resources	■	Mandatory Findings of Significance		

GEOLOGY and SOILS. Would the project:

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	☐	☐	☐	■
i) Rupture of a known earthquake fault, as delineated in the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines & Geology Special Publication 42.	☐	☐	☐	■
ii) Strong seismic ground shaking?	☐	☐	☐	■
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	■
iv) Landslides?	☐	☐	☐	■
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☐	■
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☐	■
d) Be located on expansive soils, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☐	■
e) Have soils incapable of adequately supporting the use of septic tanks or alternate wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	■

The aspects of the proposed project that could affect geologic or soil resources or result in impacts to geologic or soil conditions were in place prior to the beginning of the Division's review and are part of the baseline conditions. Specifically, the 19 af reservoir already existed when A031360 was filed. No impacts to geologic or soil conditions are expected as a result of approval of A031360.

AIR QUALITY: Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	■
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☐	■

c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☐	■
d) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?	☐	☐	☐	■
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☐	■

Project operations would have virtually no effect on air quality. Any future construction-related effects on air quality from development of the place of use would be minor and temporary. Moreover, the project site is a 1,660-acre remote ranch and is not located near any sensitive receptors. Therefore, the proposed project is not expected to have any impacts on air quality.

HYDROLOGY & WATER QUALITY. Would the project:

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?	☐	■	☐	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (*e.g.*, the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☐	■
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☐	■	☐
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	■	☐
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☐	■
f) Otherwise substantially degrade water quality?	☐	■	☐	☐
g) Place housing or other structures, which would impede or re-direct flood flows within a 100-yr. flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	■

h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	■
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	■	☐
j) Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	■

Questions a and f) Waste discharge requirements have not been established for this project. The Middle Fork of the Eel River is, however, listed on the State Water Board's 303(d) list as sediment and temperature impaired. Sources of the impairment include hydro-modification and removal of riparian vegetation, among others. The United States Environmental Protection Agency has prepared a Total Maximum Daily Load (TMDL) in response to the State's listing of the Eel River as impaired. The purpose of the TMDL is to ensure that water quality objectives for sediment and temperature are achieved in the future.

In general, irrigation and storm water runoff have the potential to introduce sediment to receiving waters. Water withdrawal has the potential to exacerbate temperature conditions by reducing the unnamed streams ability to assimilate heat. Additionally, water temperatures could be increased by the existence of the reservoir and by removal or riparian vegetation, which would otherwise provide stream shading. However, the proposed season of diversion for A031360 is during the winter period (January 1- April) and therefore diversion of water will not affect downstream temperature during the critical summer period. Ongoing project operations are not expected to increase the potential for sediment or chemical discharges beyond the existing baseline conditions. Any future ground-disturbing activities associated with development of the place of use could; however, result in increased sediment discharge from the site, potentially contributing to a violation of water quality standards or an incremental increase in siltation.

To ensure that project operations and potential future construction/development activities do not have adverse impacts from erosion and sediment, the following terms, substantially as follows, will be included in any water right permit or license issued pursuant to Application 31360:

- *Permittee shall prevent any debris, soil, silt, cement that has not set, oil, or other such foreign substance from entering into or being placed where it may be washed by rainfall runoff into the waters of the State.*

- *In order to prevent degradation of the quality of water during and after construction of the project, Permittee shall file a report pursuant to Water Code section 13260 prior to commencement of diversion or use of water under this permit and shall comply with all waste discharge requirements imposed by the California Regional Water Quality Control Board, North Coast Region, or by the State Water Resources Control Board.*

Question b) The proposed project is not expected to have any effect on groundwater.

Questions c and d) Future and continued operation of the dam; and collection and use of 19 af of water will result in alteration of the existing drainage pattern and reduce flows in natural watercourses downstream of the project. On December 1, 2004 the Division accepted a Water

Availability and Cumulative Flow Impairment Impact Analysis (WAA/CFII) prepared by the Applicant's consultant for this project. The WAA provided information to facilitate the Division's evaluation of whether there is unappropriated water available to supply the Applicant's project. The Cumulative Flow Impairment Index (CFII), which is equal to the face value of demand (October 1-March 31) divided by the seasonal volume of unimpaired flow (December 15-March 31), was calculated at four Points of Interest (POIs). Division staff selected the POIs based on recommendations from DFG (see attached WAA/CFII report).

The CFIIs range from 8.5 percent near the POD to less than one percent at all other downstream locations. Based on the analysis, it does not appear that the proposed project will have an adverse effect on downstream water right holders or cause a significant change to natural flows downstream of POI 2, if the project is operated consistent with the application. Any reduction in downstream flow caused by operation of the project is not anticipated to result in substantial siltation or erosion on-site or off-site. Reduction in downstream flows from diversion and use of water will not cause flooding. The potential biological impacts of reduced flow are discussed below in the Biological Resources Section of this document.

Question e) Proposed impoundment and use of water will reduce stormwater discharge from the site.

Questions g and h) The proposed project will not place housing or structures within a 100-year flood hazard area.

Questions i) Failure of the existing dam could expose people or structures to a risk of loss, injury or death involving flooding. The existing dam was constructed prior to the beginning of the Division's environmental review, however, and is therefore part of the baseline condition not part of the proposed project. Normal operation of the reservoir (filling, withdrawal, and spilling) is not expected to contribute to dam failure.

Question j) The project is not expected to cause inundation by seiche, tsunami, or mudflow

BIOLOGICAL RESOURCES. Would the project:

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the DFG or USFWS?	☐	■	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the DFG or USFWS?	☐	■	☐	☐
c) Have a substantial adverse effect on federally-protected wetlands as defined by Section 404 of the federal Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, *etc.*) through direct removal, filling, hydrological interruption or other means?	☐	☐	☐	■

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory corridors, or impede the use of native wildlife nursery sites?	☐	■	☐	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	■
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	■

Question a) Two qualified botanists surveyed the project area on May 19, 2003. No special status, rare, threatened, or endangered plant species were observed during the survey (Brooks 2003). Therefore, the project will have no impact on special status plant species.

A wildlife survey and habitat assessment was conducted on May 19, 2003 (Embree 2003). The wildlife report stated there is the potential for the project to adversely affect foothill yellow-legged frogs (*Rana boylii*) through the potential introduction of exotic nonsalmonid fish or amphibian species (bass, bluegills, bullfrogs) into the impoundment (wildlife report is on file with the Division). Foothill yellow-legged frogs are listed by DFG as a California Species of Special Concern. Foothill yellow-legged frog habitat could be affected downstream of the POD by a reduction of seasonal flow.

A DFG fisheries biologist surveyed the Unnamed Stream on June 4, 2001 (Jones, W. 2001). Another qualified fisheries biologist surveyed the project area and the entire Unnamed Stream between the dam and Turner Creek on February 21 and May 19, 2003 (Halligan 2006). No salmonids were observed during the surveys. In addition, representatives from DFG, NMFS, and the State Water Board observed no salmonids during a site visit on May 12, 2004.

Steelhead trout and chinook salmon are known to occur in Turner Creek, but it is unlikely that they use the unnamed intermittent stream as a spawning or nursery area. The channel immediately below the dam is normally dry from May through November and the 500-foot reach between the dam and first tributary downstream does not contain any suitable salmonid spawning or rearing habitat, but fish may use the lower reach of the Unnamed Stream as winter velocity refugia when Turner Creek experiences high flow events.

In 2002, DFG and NMFS developed Draft Guidelines for Maintaining Instream Flows to Protect Fisheries Resources Downstream of Water Diversions in Mid-California Coastal Streams (DFG-NMFS Draft Guidelines), dated June 17, 2002. (NMFS/DFG, 2002). The DFG-NMFS Draft Guidelines were recommended for use by permitting agencies (including the State Water Board), planning agencies, and water resources development interests when evaluating proposals to divert and use water from northern California coastal streams. The DFG-NMFS Draft Guidelines apply to projects located in the geographic area of Sonoma, Napa, Mendocino, and Marin Counties, and portions of Humboldt County. This project does not fall within the geographic limits of the DFG-NMFS Draft Guidelines, however, certain findings and recommendations in the guidelines are germane to this project since 1) chinook and steelhead are present in the general vicinity; and 2) the project is near the DFG-NMFS Draft Guidelines area.